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# Memorandum

To: Andrew Prophete (National Grid NY)

From: Brian Skelly

Copy to: Richard Dana and R. Scott Deyette (NYSDEC) Chris Schroer (EA Engineering) Andrew Rizk (Louis Berger) Stephanie Selmer (NYSDOH) Dave Boram and Thor Helgason (de maximis) Ted Leissing (National Grid NY) Shail Pandya (AECOM) Ronell Marshall and Clayton John (GEI Consultants, Inc.)

Date: February 14, 2013

Regarding: Weekly Community Air Monitoring Report Clifton Former MGP Site - Operable Unit 2 (OU-2) January 5, 2013 through January 11, 2013

Dear Andrew:

This report includes a summary of data collected during implementation of the Community Air Monitoring Plan (CAMP) at the Clifton Former MGP Site Operable Unit 2 (OU-2) in Staten Island, New York. Data collected are discussed in relation to remediation activities that occurred between January 5, 2013 and January 11, 2013.

There were no fifteen-minute exceedances of the Total Volatile Organic Compounds (TVOC), Particulate Matter (PM-10) [dust], or odor action levels associated with ground intrusive site activities during this reporting period. The tables and figures accompanying this report summarize air monitoring results related to the action levels described by the CAMP Work Plan (AECOM, 2011 and GEI, 2012).

The following information is summarized in this report:

- Site construction activities
- Daily maximum 15-minute average concentrations of TVOC and PM-10 (dust) at each fixed station
- Elevated concentrations (if any)
- Meteorological data

Weekly Community Air Monitoring Report Clifton Former MGP Site Operable Unit 2 (OU-2) January 5, 2013 through January 11, 2013 February 14, 2013 Page 2

## **Site Construction Activities**

Construction activities during this reporting period included:

- Excavated in Temporary Fabric Structure (TFS)
- Continued installation of plywood sound barriers along Willow Avenue
- Deconned dump trucks
- Deconned frac tank
- Loaded out soil from TFS
- Operated hoe-ram in TFS
- Received delivery of clean backfill
- Reinstalled privacy screen along the Northwest fence of OU-2
- Relocated frac tank
- Relocated various equipment across OU-2
- Stockpiled clean backfill Northeast of TFS
- Surveyed site
- Tarped dump trucks
- Transported clean backfill into the TFS

## **Data collection**

Real-time fixed station monitoring for TVOC and PM-10 (dust) was performed on the OU-2 site perimeter at six locations (FAM#1 through FAM#6. Four AirLogics Classic stations equipped with gas chromatographs (GCs) were operated at FAM#2, FAM#3, FAM#4, and FAM#5 and two AirLogics Light stations were operated at FAM#1 and FAM#6.

Table 1 summarizes the target concentrations for action levels and Site Conditions described by the CAMP. Table 2 provides a daily summary of maximum fifteen-minute average ambient air concentrations from each station. The daily reports appended to this report depict more detailed and time-specific comparison of upwind and downwind measurements and site activities that is needed to determine the Site Condition.

Upwind and downwind ambient air verification samples were collected on January 9, 2013. Meteorological data collected at the on-site weather station are included in this report as Figures 1 through 4 which show a directional wind rose for the period and temperature, relative humidity, and wind speed time series for the period.

If you have any questions regarding the information in this report, please contact me.

Weekly Community Air Monitoring Report Clifton Former MGP Site Operable Unit 2 (OU-2) January 5, 2013 through January 11, 2013 February 14, 2013 Page 3

## References

AECOM (2011). Appendix A of CERP Community Air Monitoring Plan (CAMP) Former Manufactured Gas Plant Operable Unit - 2 Remediation. Clifton, New York. August.

GEI Consultants, Inc (2012). Community Air Monitoring Plan: Clifton Former Manufactured Gas Plant Site – Operable Unit 2, Borough of Staten Island, New York. February.

New York State Department of Environmental Conservation (2010). DER-10 / Technical Guidance for Site Remediation and Investigation. Washington: Division of Environmental Remediation, December. Appendix 1-A. May.

## Table 1 - Action Levels and Site Conditions Community Air Monitoring Program Clifton Former MGP Site Operable Unit 2 Borough of Staten Island, New York

	Alert Level	Action Level	Site Condition 1	Site Condition 2	Site Condition 3
TVOC (15-minute)	3.7 ppm	5.0 ppm	< 3.7 ppm	≥ 3.7 ppm, < 5.0 ppm	≥ 5.0 ppm
TVOC (1-minute)	NA	25 ppm	< 25 ppm	NA	≥ 25 ppm
PM-10 (15-minute)	100 ug/m <sup>3</sup>	150 ug/m <sup>3</sup>	< 100 ug/m <sup>3</sup>	≥ 100 ug/m <sup>3</sup> , < 150 ug/m <sup>3</sup>	≥ 150 ug/m <sup>3</sup>
Odor (15-minute)	Odors / Complaints	NA	No odors	NA	3 (n-butanol)
HCN (15-minute)	Visual Detection	NA	< 0.6 ppm	≥ 0.6 ppm (4-gas meter)	≥ 0.6 ppm (Draeger tube)
Naphthalene (15-minute)	NA	NA	< 440 ug/m <sup>3</sup>	≥ 330 ug/m <sup>3</sup> , < 440 ug/m <sup>3</sup>	≥ 440 ug/m <sup>3</sup>

Notes:

<sup>1</sup> Alert Levels are not established by the NYSDOH or NYSDEC and are internally established concentration levels for total volatile organic compounds. Alert Levels are set below the levels established by the NYSDOH so that actions can be taken prior to exceeding a NYSDOH threshold. An Alert Level serves as a screening tool to trigger contingent measures if necessary, to assist in minimizing off-site transport of contaminants during remedial activities

<sup>2</sup> Response Levels and Action Levels are not defined in Appendix 1A of the New York State Department of Environmental Conservation *DER-10 / Technical Guidance for Site Investigation and Remediation* (NYSDEC, 2010)

ug/m<sup>3</sup> - micrograms per cubic meter

ppmv - parts per million by volume

TVOC - total volatile organic compounds

PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter

HCN - hydrogen cyanide

NA - not applicable



## Table 2. Daily Maximum 15-Minute Average Concentrations of TVOC and PM-10 Community Air Monitoring Program Clifton Former MGP Site Operable Unit 2 Borough of Staten Island, New York

			ΤV	OC			PM-10							
Date			(pr	om)			(ug/m <sup>3</sup> )							
	FAM#1	FAM#2	FAM#3	FAM#4	FAM#5	FAM#6	FAM#1	FAM#2	FAM#3	FAM#4	FAM#5	FAM#6		
1/5/2013	0.4	0.1	0.2	0.1	0.1	0.0	20	29	13	32	32	44		
1/6/2013	0.4	0.2	0.2	0.1	0.1	0.0	32	38	21	72	72	65		
1/7/2013	0.2	0.4	0.4	0.2	0.2	0.9	19	22	9	22	22	37		
1/8/2013	0.2	0.1	0.2	0.1	0.2	0.2	57	44	18	40	22	71		
1/9/2013	0.1	0.3	0.4	0.3	0.3	0.2	78	61	36	47	67	107		
1/10/2013	0.0	0.1	0.2	0.3	0.1	0.0	39	16	6	47	16	27		
1/11/2013	0.0	0.6	0.2	0.1	0.1	0.2	22	12	4	3	41	18		
Average	0.2	0.2	0.2	0.2	0.1	0.2	38	32	15	38	39	53		
Maximum	0.4	0.6	0.4	0.3	0.3	0.9	78	61	36	72	72	107		

Notes:

FAM - fixed air monitoring station location

ug/m<sup>3</sup> - micrograms per cubic meter

ppmv - parts per million by volume

TVOC - total volatile organic compounds

PM-10 - particulate matter (i.e. dust) less than 10 microns in diameter



#### Figures 1-4 Meteorological Data Weekly Community Air Monitoring Report Clifton Former MGP Site Operable Unit 2 Borough of Staten Island, New York

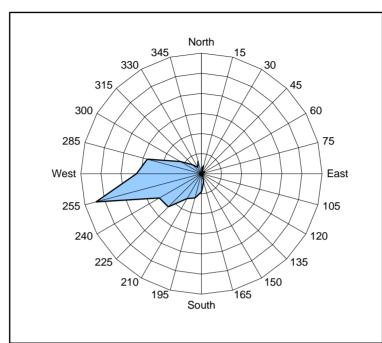


Figure 1. Wind rose for the period 01/05/13 through 01/11/13 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Wind direction data used to create the wind rose were calculated from 1-minute data.

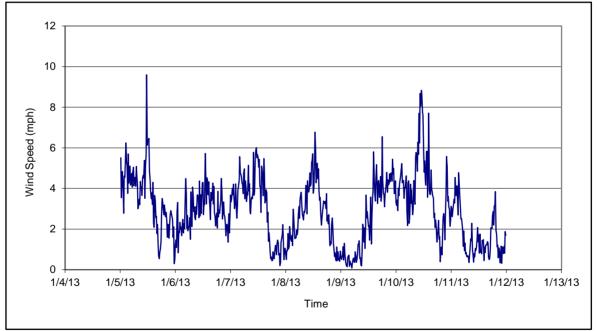


Figure 2. Wind speed for the period 01/05/13 through 01/11/13 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

Figures 1-4 Meteorological Data Weekly Community Air Monitoring Report Clifton Former MGP Site Operable Unit 2 Borough of Staten Island, New York

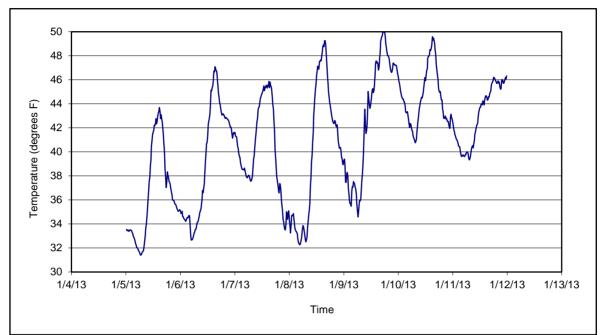


Figure 3. Temperature for the period 01/05/13 through 01/11/13 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

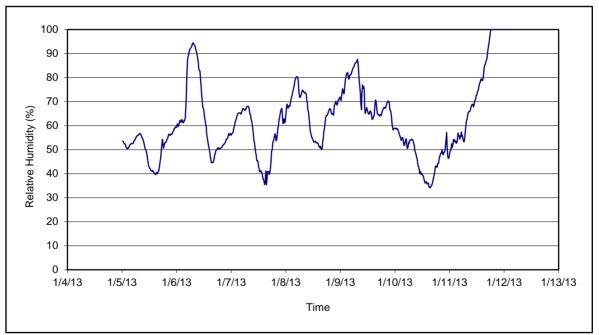


Figure 4. Relative humidity for the period 01/05/13 through 01/11/13 collected during CAMP implementation at the Clifton Former MGP Site - Operable Unit 2. Data are 15-minute averages.

	System Op										General Observations						
		mpling Date	1/7/2		General Weath												
		n Start Time	contir		Clear- ~	38°F - ~	-41°F										
		n Stop Time		nuous													
	Total Hr	s Monitored	2	4	General Descr												
					Health &				Continued installation of plywood sound barriers along Willow Avenue								
		Calibrations		0k	Continuo				Relocated various equipment across OU-2								
	(1	ime/Status)	0655	-0920			nporary Fabric Strue	cture (TFS)	S) Operated hoe-ram in TFS								
					Deconne												
					Loaded of												
					Tarped d	ump tru	cks		-								
					# of					linute							
Date	Alert	Station	Start	End	15-min	Wind	Upwind/	Upwind		nd-Upwind	Site Condition	Site Activity During the Period	Actions Taken				
	Trigger		Time	Time	Periods	Dir.	Downwind	Station(s)		ntration Max**		(if applicable)					
01/7/13	No exceedances								Min**	wax		-	None taken				
011110	no onoodanood												None taken				
	1						ł					<u> </u>					
	-																
Comments:																	
comments.																	
							(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)					
				ert Limit:			ug/m <sup>3</sup>	3.7 ppm			-	-					
			Acti	ion Limit:		150	ug/m <sup>3</sup>	5.0 ppm			25 ppm	3 (n-butanol scale)					
lotes:																	
* Wind dire	ections are presented	d by octant (i.	e. N, NE	, E, SE, S	S, SW, W, NW).				PM-10 - p	articulate ma	tter (i.e. dust) less than 10 mic	rons in diameter					
	minus downwind cor										ganic compounds						
	d Air Monitoring stat																
	crograms per cubic r								NA - not a								
ppmv - par	ts per million by volu	ime							ND - no da	ata available		Field Representative:	C. John				
												Date:	1/7/2013				
													Page 1 of				



	System Op	erations									General Observations				
		ampling Date	1/8/2	2013	General Weath	ner Cond	litions:								
	Syster	n Start Time	conti	nuous	Clear- ~	33°F - ~	-47°F								
		m Stop Time		nuous											
	Total H	rs Monitored	2	4	General Descri										
					Health &					nside of frac	tank				
		Calibrations		0k	Continuo				Surveyed						
	(	Time/Status)	0643	-0949			porary Fabric Stru	cture (TFS)	Operated hoe-ram in TFS						
					Deconne										
					Loaded o										
	1	-			Tarped d	ump true	CKS			•• •					
	Alert		Start	End	# of	Wind	Upwind/	Upwind		linute nd-Upwind		Site Activity During the Period			
Date	Trigger	Station	Time	Time	15-min	Dir.	Downwind	Station(s)		ntration	Site Condition	(if applicable)	Actions Taken		
					Periods	5	Dominia	etation(c)	Min**	Max**		(ii applicable)			
01/8/13	No exceedances												None taken		
		-										+ +			
									1						
Comments:															
						PM-10	(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)			
			AI	ert Limit:			ug/m <sup>3</sup>	3.7 ppm			-				
				ion Limit:			ug/m <sup>3</sup>	5.0 ppm			25 ppm	3 (n-butanol scale)			
Notes: * Wind dire	ections are presente	d by octant (i	.e. N. NE	. E. SE. 3	S. SW. W. NW).				PM-10 - p	articulate ma	atter (i.e. dust) less than 10 mic	rons in diameter			
	minus downwind co										rganic compounds				
	d Air Monitoring star			•	·										
	crograms per cubic i								NA - not a	pplicable					
ppmv - part	ts per million by volu	ume							ND - no da	ata available		Field Representative:	C. John		
												Date:	1/8/2013		
													Page 1 of _1		



	System O	perations									General Observations		
	S	ampling Date	1/9/2	2013	General Weath	er Conditi	ons:						
	Syste	m Start Time	contir	nuous	Clear- ~	43°F - ~58	5°F						
		m Stop Time	contir										
	Total H	Irs Monitored	2	4	General Descr	ption of Si	te Activities:						
					Health &	Safety Me	eting		Relocated	Frac Tank			
	System	n Calibrations	C	)k	Continuo	us Air Mor	itoring						
	(	Time/Status)	0714	-0838			orary Fabric Structu	re (TFS)					
						d dump tru							
						out soil fror							
					Tarped of	ump truck	5						
					# of					linute			
Date	Alert	Station	Start	End	15-min	Wind	Upwind/	Upwind		d-Upwind	Site Condition	Site Activity During the Period	Actions Taken
Date	Trigger	otation	Time	Time	Periods	Dir.	Downwind	Station(s)		ntration	Sile Solidition	(if applicable)	
									Min**	Max**			
1/9/2013	PM-10	FAM#6	7:09	7:24	16	SSW	CW	FAM#5	52	58	1	Vehicular Traffic	None taken
1/9/2013	PM-10	FAM#6	7:29	7:47	19	S	DW	FAM#5	50	52	1	Vehicular Traffic	None taken
1/9/2013	PM-10	FAM#6	8:09	8:24	16	SSE	DW	FAM#5	62	92	1	Vehicular Traffic	None taken
Comments:													
						PM-10 (		TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)	
				ert Limit:		100 L		3.7 ppm			-		
			Acti	on Limit:		150 u	ig/m	5.0 ppm			25 ppm	3 (n-butanol scale)	
lotes:													
	ctions are presente										tter (i.e. dust) less than 10 mic	rons in diameter	
	ninus downwind co		are a time	e specific	comparison.				TVOC - to	tal volatile or	rganic compounds		
	d Air Monitoring sta												
	rograms per cubic								NA - not a			Field Representative:	
ppmv - part	s per million by vo	ume							ND - no da	R. Marshall			
												Date:	1/9/2013
													Page 1 of _



	System Op	erations									General Observations						
		mpling Date	1/10	/2013	General Weath	er Conc	itions:										
		n Start Time		nuous	Clear- ~	43°F - ~	-55°F										
	Syster	n Stop Time	conti	nuous													
	Total Hrs Monitored 24 General Description of Site Activities:																
					Health &				Relocated Frac Tank								
		Calibrations		Dk	Continuo				Delivery of clean backfill								
	٦)	ime/Status)	0820	-0956			porary Fabric Stru	cture (TFS)		Stockpiled clean backfill NE of TFS							
					Deconned dump trucks				Deconned	Frac tank e	ast of TFS eastern entrance						
					Loaded of												
					Tarped d	ump tru	cks		-			1					
					# of					linute							
Date	Alert	Station	Start	End Time	15-min	Wind	Upwind/	Upwind Station(s)		nd-Upwind ntration	Site Condition	Site Activity During the Period	Actions Taken				
	Trigger		Time	Time	Periods	Dir.	Downwind	Station(s)	Min**	Max**		(if applicable)					
01/10/13	No exceedances								IVIIII	IVIDA			None taken				
	-			-				-									
Comments:								1				l l					
							(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)					
				lert Limit:		100	ug/m <sup>3</sup>	3.7 ppm			-	-					
			Act	ion Limit:		150	ug/m <sup>3</sup>	5.0 ppm			25 ppm	3 (n-butanol scale)					
Notes:																	
	ections are presented										atter (i.e. dust) less than 10 micro	ons in diameter					
	minus downwind cor		are a tim	e specific	c comparison.				TVOC - to	tal volatile o	rganic compounds						
	d Air Monitoring stat																
	crograms per cubic r								NA - not a								
ppmv - par	ts per million by volu	ime							ND - no da	ata available	1	Field Representative:	C. John				
												Date:	1/10/2013				
													Page 1 of _1				



	System Op	erations									General Observations					
		mpling Date	1/11/	2013	General Weath											
	Syster	n Start Time	contir	nuous	Overcast	- ~ 39°l	F - ~44°F									
		m Stop Time		nuous												
	Total Hrs Monitored 24 General Description of Site Activities:															
					Health &				Relocated Frac Tank							
		Calibrations		0k	Continuo				Delivery of clean backfill							
	(1	Fime/Status)	0750	-0905			porary Fabric Stru	cture (TFS)	Stockpiled clean backfill NE of TFS							
					Deconne						ast of TFS eastern entrance					
					Loaded of						reen along the north west fence	of OU-2				
		1		-	Tarped d	ump tru	cks	1	1		fill into the TFS	т — т				
					# of					/linute						
Date	Alert	Station	Start	End	15-min	Wind	Upwind/	Upwind		nd-Upwind	Site Condition	Site Activity During the Period	Actions Taken			
	Trigger		Time	Time	Periods	Dir.	Downwind	Station(s)	Min**	ntration Max**		(if applicable)				
01/11/13	No exceedances				1				IVIIII	IVIAX			None taken			
01/11/10	no onoodanood												None taken			
					1				1			<u> </u>				
Comments:																
comments:																
						PM-10	(15-min)	TVOC (15-min)			TVOC (1-min)	Odor Intensity (15-min)				
			AI	ert Limit:			ug/m <sup>3</sup>	3.7 ppm			-					
				ion Limit:			ug/m <sup>3</sup>	5.0 ppm			25 ppm	3 (n-butanol scale)				
Notes:											••					
	ctions are presented	d by octant (i	e N NF	E SE S	S SW W NW				PM-10 - p	articulate m	atter (i.e. dust) less than 10 micro	ons in diameter				
	minus downwind cor										rganic compounds					
	d Air Monitoring stat										3					
	crograms per cubic r								NA - not a	pplicable						
	ts per million by volu								ND - no data available Field Representative:							
	. ,											Date:	1/11/2013			
												_	Page 1 of _			

